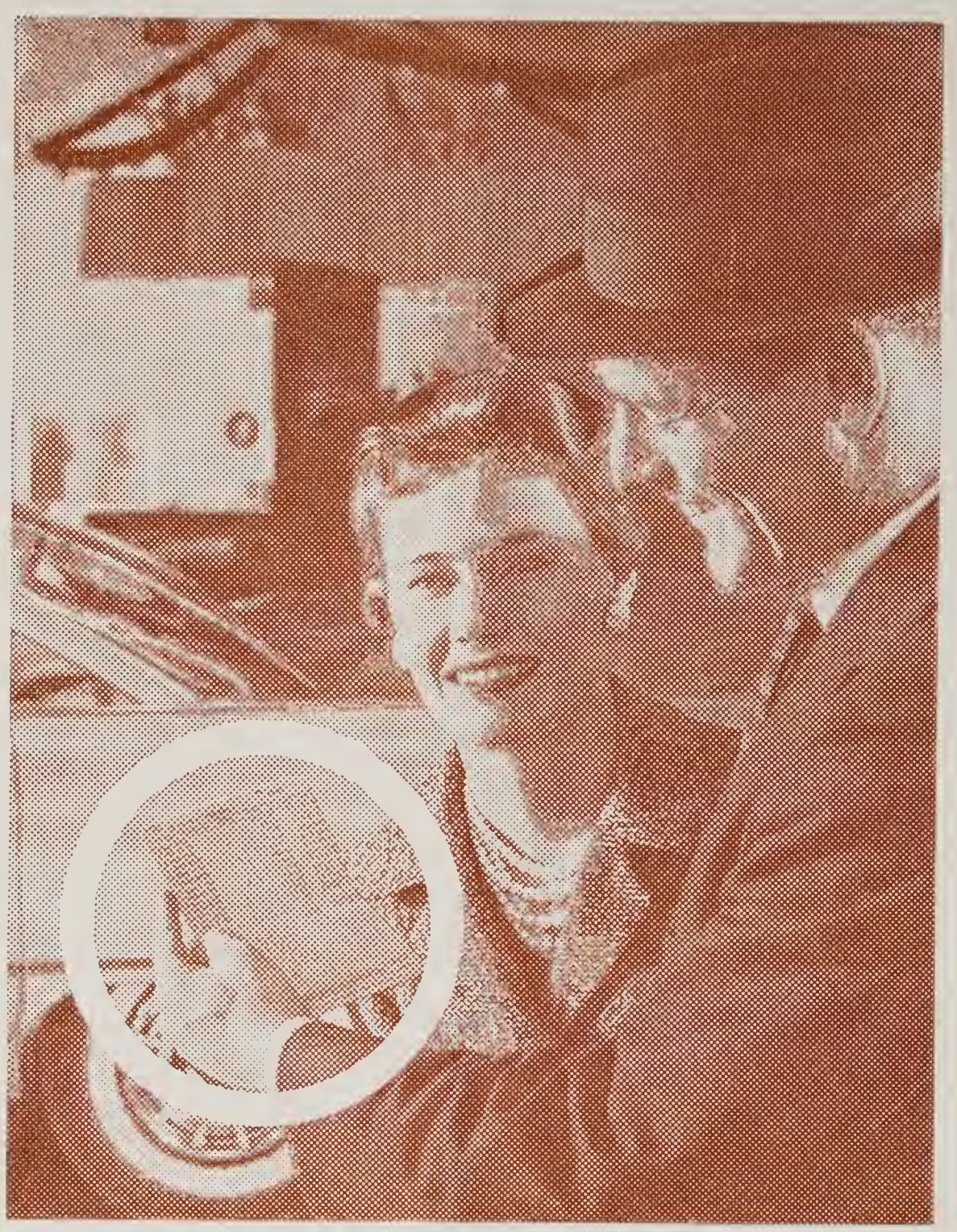
THE UNIVERSITY OF WASHINGTON

Arboretum bulletin

FALL 1962



Save for the *Fun* things

Save for the down payment on a new car . . . a vacation trip . . . a new boat . . . the many other "fun things" in your future. Open a Seafirst Savings Account.

You're always welcome at...

SEATTLE-FIRST NATIONAL BANK

SEAFIRST

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

THE UNIVERSITY OF WASHINGTON

Arboretum bulletin

A JOURNAL OF GENERAL HORTICULTURAL INFORMATION
PUBLISHED QUARTERLY BY THE UNIVERSITY OF WASHINGTON
ARBORETUM FOUNDATION • SEATTLE 5, WASHINGTON

No part of this BULLETIN may be reprinted without the authority of the Arboretum Foundation.

VOLUME XXV, NUMBER 3

Fall, 1962

TABLE OF CONTENTS

Arboretum Report (July 1, 1961 to June 30, 1962) . . . B. O. Mulligan 62
A Hillside Garden in the Spring . . . Nancy Davidson 64
A City Garden . . . Robert W. Chittock 67
Woodland Garden . . . Lyn Davis 69
The Low Maintenance Garden . . . Mrs. Ray Brandes 72
A Collector's Garden . . . Mrs. Edward Maxey 75
Problem Areas in the Garden . . . Mrs. Willard E. Skeel 76
New or Unusual Plants in the Arboretum . . . J. A. Witt 79
What to See in the Arboretum October, November, December . . . 80
Some of Our Favorites . . . 81
Book Reviews . . . 86

COVER PHOTO:

Sorbus Chamaemespilus var. *sudetica* fruiting in nursery, Sept. 9, 1959
(slightly over life size)

PHOTO BY: WILLIAM ENG

Arboretum Report

July 1, 1961 to June 30, 1962

B. O. Mulligan*

Principal Developments and Improvements

A MAJOR drainage operation was carried out during August and September, 1961, to improve the condition of the wet grass area between Azalea Way and Rhododendron Glen. Some 500 feet of old drains were dug out, cleaned and relaid, and 600 feet of new 4- or 6-inch tiles laid, the trenches then filled with washed gravel. Results have been excellent.

A new south entrance was designed and constructed at the Japanese garden, the work being done by the Physical Plant Department of the University. Two turnstiles and a change machine were set up at this entrance, which was opened on October 13, and an attractive new stone drinking fountain at the original north gate. For the last six weeks installation of an extensive automatic sprinkling system has been under way in this garden, again using University labor.

Construction of the second Lake Washington bridge and the complex Arboretum interchange at its western approach, which began in February, caused considerable extra work in the affected areas. All useful trees—ash, maples and alders—were cut down and removed, sprinkler heads taken up, and about 150 trees removed by a contractor to the campus. These included 83 crab apples, 31 Japanese cherries and 28 mountain ashes.

A new roof was laid on the office building in August and both the interior and exterior of this, as well as the service building to the north, were subsequently painted.

The bank east of the Boulevard facing the north entrance to the Japanese garden has been much improved by the removal of grass, placing of two large groups of rocks and planting with native shrubs. This work, done between February and April, was financed entirely by the Seattle Garden Club.

All usual maintenance work was carried out during the year. Extra attention was paid to the strip west of Lake Washington Blvd. E. to Azalea Way and areas around the Japanese garden, where a number of dead maple trees had to be removed.

Staff

The nursery foreman, L. J. Michaud, retired in December after nearly 17 years' service. He was succeeded February 1 by Samuel Stevens, previously a nurseryman in Hawaii and Los Angeles.

The nurseryman in the same department, J. A. Buzard, also retired in March, having worked here for 10½ years. His successor is Dirk van Klaveren, originally a nurseryman in Holland.

Four temporary groundsmen were hired in the spring of 1962, two additional part-time gatekeepers for the Japanese garden. Two part-time gardeners are also employed in the latter, from March through October.

Through a private grant one man has continued work on a part-time basis on the catalogue of trees and shrubs growing in the Arboretum.

Acquisitions

(a) Seeds

Two hundred seventy-nine packets were received from all parts of the world, especially from other arboreta and botanical gardens with which we exchange seeds. Fourteen kinds of tree and shrub seeds from Buenos Aires, Argentina; 15 species of rhododendrons from New Guinea, and 12 from the Himalayas were especially notable.

(b) Plants

Three hundred twenty-three kinds were acquired, chiefly by gift or exchange, a small proportion by purchase for special purposes. While most originated in the U. S. some were sent from overseas, including magnolias *(M. Campbellii)* from the Royal Botanic Garden, Kew, England; birches, junipers and maples from the University of Grenoble, France.

*The Director's Report for the office of the President of the University.

The U. S. National Arboretum, Washington, D. C., sent a collection of 31 kinds of garden forms of conifers; the Central Experimental Farm, Ottawa, Canada, a number of *Buddleia* species and hybrids.

(c) Books

Thirty-five titles were added to the library during this year. Eleven of these were sent by the publishers for review in THE ARBORETUM BULLETIN, six were gifts, the remainder purchased. Amongst those sent for review was *Rhododendrons of the World,* by David G. Leach (Chas. Scribner's Sons, New York, 1961. Price, $25.00.)

(d) Gifts and Donations

A large number in very varying amounts has been received, the majority from Arboretum Units or garden clubs.

The most prominent, perhaps, are the rock outcrops on the bank east of the Boulevard, opposite the north end of the Japanese garden, given with the surrounding plantings by the Seattle Garden Club. This club has also donated $1,000 for maintenance of Azalea Way during the summer.

A memorial to the late Mrs. Frank Preston, designed by Mr. Noble Hoggson, was constructed and dedicated in May, 1962, consisting of a stone walled and paved area with cedarwood benches. This was in part a gift from friends, in part from Mr. Preston.

Mr. Prentice Bloedel contributed $1,000 for additional signs for trees and shrubs and $800 to continue work on the catalogue.

Plant Material Distributed

Three thousand eight hundred forty-nine packets of seeds were sent to 168 institutions and correspondents throughout the world between January 22 and May 28, 1962. The work required for this task was performed by members of Unit 25, to whom we are especially grateful.

For 1961 the respective figures were 2,560 packets and 145 institutions.

Sixty-six other lots of plants, scions or seeds were dispatched, principally to other similar institutions; 19 went overseas, nearly all to European countries.

Educational

Arboretum staff members took part in classes organized by the Arboretum Foundation, on Garden Maintenance, Propagation, a training course for guides from Arboretum Units, introduction to Rhododendrons, and a professional course on the Arboretum and its facilities for elementary grade teachers from Seattle public schools.

Thirty talks, usually illustrated by slides, were given to groups by the Director or Assistant Director, 27 parties taken on guided tours, normally by the latter. The Director spoke at Oregon State University, Corvallis, in February; in Portland, Oregon, to the local chapter of the American Rhododendron Society, and to the Victoria Horticultural Society, B.C., in April.

An exhibit of wild and cultivated conifers was set up in the clubhouse the week end of November 11-12, numbering 85 distinct kinds.

A large group was staged at the Seattle Rhododendron Society's show, held May 17-20 in the Display Hall of the new Opera House.

New Plantings

From October 1, 1961 through May 31, 1962 (8 months) 1029 plants of more than 400 kinds were set out, in many parts of the Arboretum. Amongst them were 21 new camellias, 17 lilacs, 19 viburnums, 20 plants of birches (of 7 kinds), etc.

More broad-leaved evergreens (46) were planted in the Japanese garden, and 12 plants of true firs *(Abies)* along its western boundary.

Japanese Garden Visitors

Total from January 1, 1962 to June 31, 1962, 45,302 persons. In May alone 13,420; in June, 18,267. In June, 1961, the first month when turnstiles were operating, we had 11,195 visitors.

Traffic Count at North Gate

July 1, 1961 to June 30, 1962	147,936
July 1, 1960 to June 30, 1961	145,181

(Continued on Page 88)

In our last issue we presented three articles summarizing the kinds of plants—Trees, Shrubs and Ground Covers—used in gardens around Puget Sound.

In this number we offer our readers descriptions (and some pictures) of four different types of gardens to be found in Western Washington—three in or near Seattle, one close to the coast some 80 miles to the southwest in an air line. We hope that they may prove inspirational to our readers, especially those who have to cope with similar sites or problems.

A Hillside Garden in the Spring

NANCY DAVIDSON*

HILLSIDE gardens are a Seattle specialty, but few are as beautiful in May as that of Mr. and Mrs. Henry C. Isaacson. On a west-facing slope rich in native conifers and vine maples are reflected the talents of two outstanding Northwest landscape architects, Mr. John Grant and Mr. Otto E. Holmdahl. In addition, the owner herself is a dedicated gardener.

The two-acre garden was begun 25 or 30 years ago when a shelf was cut into the slope to accommodate a summer house and driveway. Later, after the Isaacsons bought the property, John Grant worked with Mrs. Isaacson to establish terrace levels, and bank plantings around what soon developed into a permanent residence. Then Mr. Otto Holmdahl helped Mrs. Isaacson design new areas as the garden expanded and more and more property was included.

The solutions reached in this garden to problems generated by a hillside site are worth the study of anyone who gardens on a slope. Terraces have been leveled close to the house by means of concrete retaining walls which are seldom over three feet high, and are almost invariably masked or patterned with vines.

The exception is an eight-foot retaining wall which forms the east side of the driveway and entrance court: against it grow a line of espaliered pear trees.

A generous circular terrace swings out at basement level to balance the house, which is three stories tall on its lower side. From here you look through the trees toward a distant view of Puget Sound, and down into the whorled pattern of rhododendron foliage or the shadowy green of vine maples (fig. 8).

Except for the terraces close to the house, the formal rose garden and the plot for cutting flowers near it, the contour of the hillside remains unchanged. Paths cut across it, never going straight up or down, so that you aren't aware of steepness, but only of going on and on from one lovely spot to another through what seems like twice two acres. Occasionally a few rocks form an outcrop for the path to swing around, and at two points pools tucked into the hill emerge as surprises.

Mrs. Isaacson loves plants, and like so many of us, she can't resist growing them in bewildering variety. She brings back plants when she travels, and her friends give her plants. Organizing these into meaningful landscape is a task for an expert. The second lesson in this garden is "how to put plants together." One rule: group plants together that like the same exposure, soil, and general growing conditions. On a sunny slope golden chain trees bloom behind a group of lilacs in white, blue, lavender and a fine deep purple called "Congo"; their base limbs have been thinned to make a clean, strong pattern. In

View westward over Puget Sound to the Olympic Mountains from the Isaacsons' garden.

FIG. 8 PHOTO BY: DICK ANDERSON

*We are happy to offer this vivid word picture by Nancy (Mrs. Philip D.) Davidson, the talented Northwest Editor for *Sunset* magazine.

front of them, the flamboyant blooms of tree peonies enjoy light shade.

For a self-maintaining bank cover, with a background of native conifers, kinnikinnick is the carpet, glossy leaved under groups of manzanita where the sun hits, and framing lustrous native huckleberry bushes where there is more shade. The manzanita has silver grey foliage, but its small pink lantern flowers are similar in shape to those of the smaller leaved huckleberry.

For foliage color all year, a line of 30-foot purple-leaved plums have been pruned high and open so that the tracery of their dark branches shows against the sky. Under them grow banks of red rhododendrons with the yellow-green foliage of may-apple as a carpet.

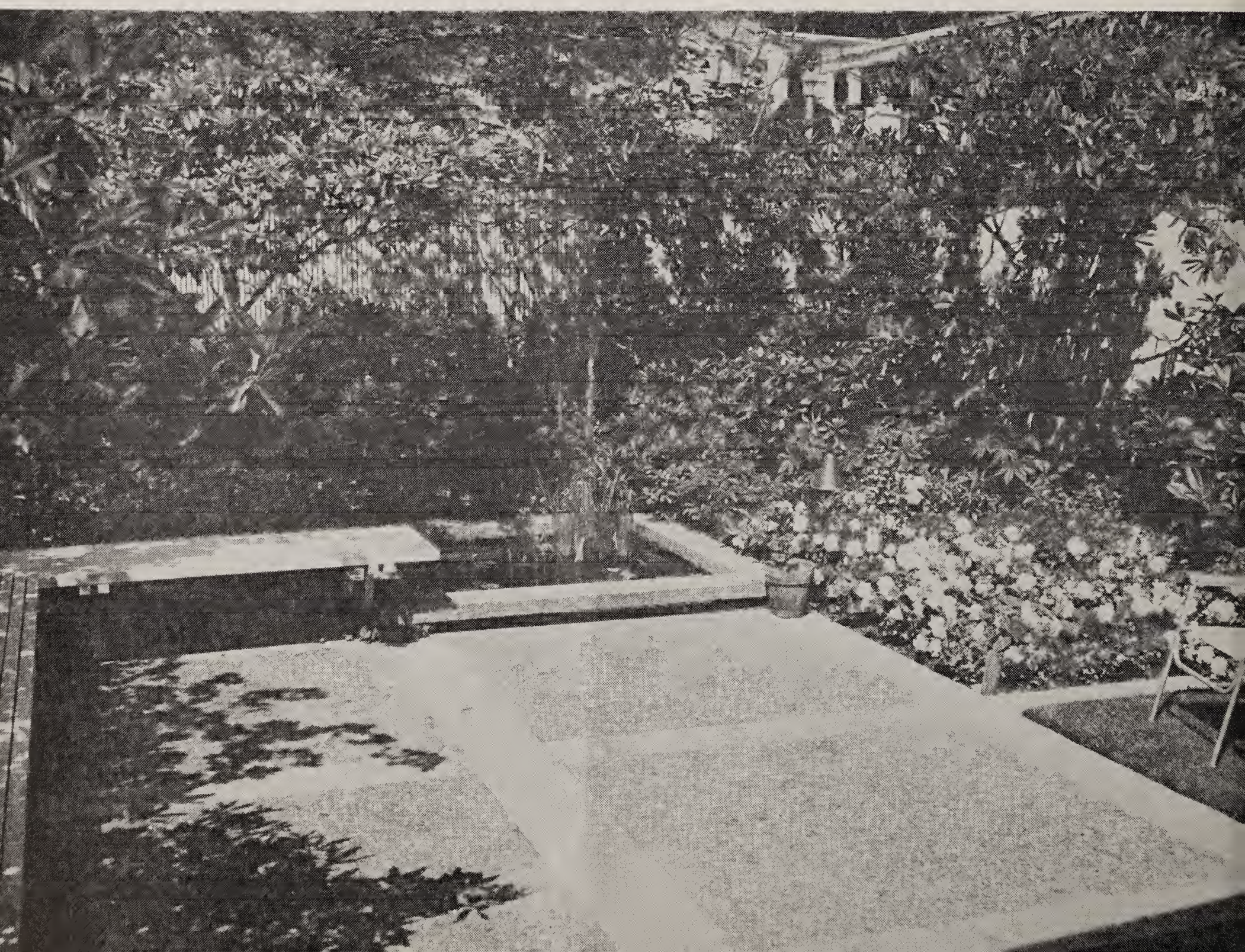
By the pool, a scarlet leaved Japanese maple has its branches entwined by one of the more restrained clematis *(C. macropetala)*. The soft blue clematis flowers have pointed petals with the texture of tissue paper backing clusters of white stamens.

And along a woodsy path, yellow azaleas 'Adriaan Koster' are set off by *Enkianthus,* the metallic new leaves of *Mahonia Aquifolium,* and the bright lavender blue flowers of *Rhododendron Augustinii,* above a ground cover of *Ajuga.*

As you stroll across slopes which never seem too steep, you pass a single pale pink rhododendron above drifts of white violets; the immense white blooms of *R. Loderi* near a blood-red maple, yellow species rose *R. Hugonis* arching flower-heavy branches near lavender lilacs which are matched by a nearby hedge of English lavender.

"My woodsy area is really my favorite" says Mrs. Isaacson. Here under vine maple and Douglas fir grow more than a dozen groundcovers; sweet woodruff, lily of the valley, *Oxalis, Epimedium* and small leaved ivy. A little taller are the clumps of trilliums, the nodding blue Roman hyacinths, the primroses, and of course the rhododendrons.

(Continued on Page 87)



A City Garden

ROBERT W. CHITTOCK*

WHEN Mr. and Mrs. A. Sherman Ellsworth first decided to build a new house in the same area where they were presently living in Seattle (Broadmoor), they first contacted an old friend who was an architect, Mr. Thomas, to start them on the road to a new environment. They then consulted a decorator, Mr. Lou Swift, to work with the architect to bring about a house for their needs.

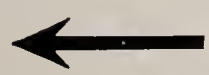
It became apparent that the next step was to have some assistance on the exterior grounds, for on the new lot the view was of very little significance, so they would have to produce their own views. They then engaged a landscape architect, the writer, to help them decide their outdoor design.

After conferences with client, decorator and architect a garden was then conceived. The age of elegance was back in the garden. So with formal ideas, strong architectural features, and pools used in abundance, the garden became a reality. It had the feeling of a Pompeian garden. For the living room was part of the garden, thus making it almost a court within the house.

The lot, setting for both house and garden, had considerable slope which was not desired by Mr. and Mrs. Ellsworth, for on a small lot this would result in a great many steps. So the house was placed below street level to allow for three gentle steps to approach it and a garden court in front, useable by the Ellsworths yet not in view of passing motorists (fig. 9).

The front court receives the afternoon sun and begins the water motif used in the rest of the garden. A raised reflection pool with copper verdigris flower fountains send up tiny jets to produce a tinkle of water sounds.

*A graduate of the University of Oregon school of landscape architecture, practicing in Seattle since 1957. We are glad to welcome Mr. Chittock to our pages.



Front Court of Ellsworth garden.

FIG. 9 PHOTO BY: WM. ENG

The foil of plants in the garden has a color scheme of white and pink. Rhododendrons make the main display. Three large specimen rhododendrons 12-15 feet tall were brought into the garden by crane, one 'White Pearl' and two *R. decorum* hybrids of unknown parentage. Others were 'Mrs. A. T. de La Mare' (light pink), 'Dr. Stocker' (white), 'Diane' (lime yellow), 'Bowbells,' *R. calophytum* near the pool edge,—a difficult plant to find of any size because of its slow growth,—'Olympic Lady,' *R. racemosum,* 'Temple Belle,' 'Princess Juliana' and 'Naomi' hybrids. Also used were *Pieris japonica* and *Pieris Forrestii, Kalmia latifolia* (Dexter Strain), Azalea 'Snowdrift,' a white evergreen type, and a deciduous Dutch hybrid called 'Lucile,' a striking raspberry with an orange throat.

As accent marks *Acanthus mollis* for its unusual summer bloom and exotic foliage, *Cordyline indivisa* for its soft, spiky change in foliage and texture. Also the various forms of hellebores and hostas were used to widen the season of bloom in the garden.

To help give the light shade needed on the rhododendron foliage vine maples were moved and placed within the planting area, thus producing a lush green and colorful permanent planting bed, sprinkled with touches of shade patterns from the lacy foliage of the vine maples. The terrace has adjacent to it a small carpet of lawn, around eight by ten feet, just large enough to give the feeling that only grass can give when it is manicured.

The main garden is in the rear, reached either through the house, which gives the best approach, or around the house through a small lineal cutting garden and concealed work storage compartment. The garden is first approached from the house through glass sliding doors, making the garden an integral part of the living space at all seasons.

An exposed aggregate terrace extends the entire length of the rear of the house, framed with low, wide white benches, giving ample

space for guests and family to circulate and sit and view the garden.

On the axis with the front door the fountain group starts the display. It is a group of phoenix birds dancing wildly while the water plays through lotus flowers. From the brass basin of the birds, water pours into another pool raised and cantilevered above the main grade of the garden. Within the pool a fountain sculpture of lilies spouts water, and from this raised pool water then pours and falls into an intermediate pool and finally into a large canal pool, three by twenty-seven feet, filled with water lilies and interesting water plants. The pool extends the entire length of one of the levels of the garden, and one crosses the water on a thin pebbled concrete bridge. Near the bridge at one end of the canal emerges a giant lotus gas lantern with its lazy flame accenting foliage and features at night, giving a warmth to a winter garden that only flames can give.

The main living room garden has as its composition a series of levels from terrace to pools to lawn area. The plant material was planned on a yellow and white color scheme giving accent to the interiors of the house which are done in green and white. At the main pool canal level a series of white arbors surround the garden, providing a foil to stop one's eye from looking at other houses close by and support for vines of white clematis and white wisteria (fig. 10).

On the axis with the living room a fine metal grill, like Rhama screen, was used to obscure the view of another house, producing an effect which seems sheer fabric placed in panels on the back of the arbor.

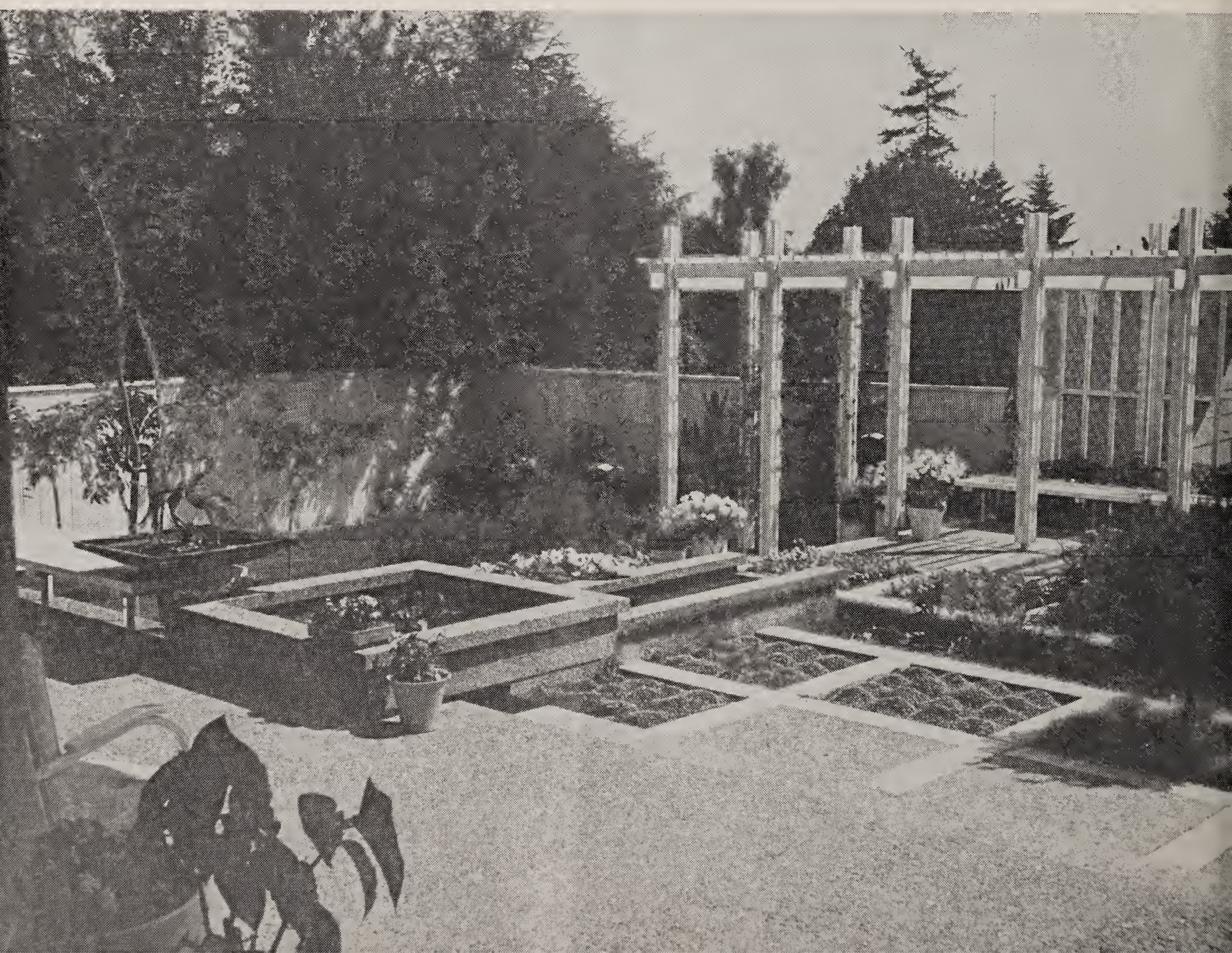
The plant material in the garden off the living room consisted mainly of *Pieris japonica, Rhododendron* 'Unique,' *Fatsia japonica* and white evergreen azaleas. For accent Tan-

(Continued on Page 87)

Below—

Main garden viewed from the terrace.

Fig. 10 Photo by: Wm. Eng



Woodland Garden

LYN DAVIS*

THE first time I visited Mrs. John M. Blackford's woodland garden on Mercer Island was in the company of a group of plant experts acting as judges in the 1955 Rhododendron Garden contest. This was the last garden to see: the day had been rushed; there were ferries and planes to catch. The winding road down the west side of the island seemed endless. As we turned sharply down a steep drive to a parking area next to a small log cottage, all thought of fatigue vanished. For here, in a verdant woodland setting, was a garden of great beauty. At the Seattle Rhododendron Show later that May, Mrs. Blackford was awarded the blue ribbon for the outstanding rhododendron garden in the suburban Seattle area (fig. 11).

Well-known for its collection of choice rhododendrons, including 'Mrs. John Blackford', a beautiful *R. occidentale* hybrid grown and named by the late Endre Ostbo, this enchanting two-acre garden also contains a mouth-watering variety of ornamental trees, ground covers and shrubs outside the rhododendron family. There is the flavor of the Blue Ridge mountains apparent in the selection of plant material. Mrs. Blackford, a native of Virginia, likes to grow plants familiar to her in her youth. *Shortia, Galax, Oxydendrum arboreum,* pink dogwood, eastern azaleas—they are all here, and many more.

Sixteen years ago the development of the garden commenced. It had been the owner's long ambition to have a woodland garden, and this four acres bordering Lake Washington was an ideal location for the type of garden she had in mind. The land, composed of peat and rich leaf mold, gently sloped down to the lake. Water run-off from the hillside had formed low areas separated by hummocks. In the gradual development of the garden—all tilled by hand—the contours were left untouched, as were fallen logs, stumps, and much of the virgin growth including huge bigleaf maples, vine maples, firs, western hemlocks, western red cedars, dogwoods, cascaras, as well as pure stands of Oregon grape and salal.

Near the house on the upper reaches of the property, curving lawns were laid out to contrast with the rich foliage masses. A winding drive, bordered with eye-catching combinations of flowering plants, takes visitors down from the house to the true woodland garden. A series of meandering paths lead back to the lawn areas.

Mrs. Blackford has definite ideas of just what a woodland garden should be, and has personally carried out the over-all design and grouping of plants throughout the garden. Here are some of her comments as we strolled along the paths last May.

"It's important to keep the natural contour of the land unchanged. Long vistas are necessary in a woodland garden, and these are possible when you use low plantings in swampy areas." We noticed healthy, natural-appearing plantings of Japanese iris, *Spiraea,* skunk cabbage, to name a few, in these areas.

"No pruning is permissible in the woodland, except for the removal of dead twigs, faded blossoms, and occasional thinning of long shoots from the base of the plant. Deciduous trees and shrubs lighten and add to the charm of a woodland. I plan with foliage in mind, rather than concentrating on color, and also select plants for seasonal interest. White flowers are excellent in a woodland. Ground-covers come last in building a garden."

It was interesting to see which plant material our knowledgeable hostess felt was qualified for her woodland. Among the shrubs we admired were tall, slender, very beautiful specimens of *Enkianthus campanulatus,* red-berried *Skimmia japonica,* the single-

*Besides being a member of THE BULLETIN Editorial Board, Mrs. (Donald C.) Davis is a long-standing member of the Seattle Rhododendron Society and herself a well-qualified gardener.

flowered form of *Kerria japonica,* and *Viburnum tomentosum,* with its horizontal branches white with bloom. The leathery-leaved, evergreen *Viburnum Davidii* was handsome growing on an open bank next to a low-growing evergreen *Ceanothus.* Drifts of *Helleborus corsicus* are seen frequently in the woodland. "One of my favorites, with its attractive foliage and long-lasting greenish flowers that contrast well with many other colors," Mrs. Blackford commented.

Species rhododendrons and small-leaved hybrids grow to perfection here. Rosy-belled *R. glaucum* overhangs a reflection pool. At a bend in the path, several *R. Williamsianum* plants, with their distinctive rounded leaves, are combined with two other dwarf rhododendrons, *R. impeditum* and *R. caesium,* whose blue-green foliage adds interest. Overhead, the series *Triflorum* species *R. Augustinii* and *R. yunnanense* spread slender branches.

On a mossy bank open to the afternoon sun is a handsome specimen of the bronzy-foliaged, evergreen *Stranvaesia undulata,* spreading low and wide. This plant is the parent of many rooted cuttings sold at Arboretum sales.

Deciduous azaleas are everywhere in the garden. Large specimens of *R. occidentale,* the native azalea, grow in the filtered shade as well as in the full sun. "You might call this the theme azalea of the garden," commented Mrs. Blackford. *R. Schlippenbachii, R. nudiflorum, R. calendulaceum, R. arborescens* are all used freely. *R. viscosum,* the Swamp Honeysuckle azalea, flourishes in damp spots.

Several of the ornamental trees were a surprise to see here. The sumac, trained tall for a high feathery canopy over a path, and several white variegated Box Elders *(Acer Negundo* 'Variegatum') were located where they light up a whole area of the garden silhouetted against tall, dark conifers and red-berried elderberry plants. *Styrax japonica,* with its dainty June-flowering bells, looked right at home near the pool, though its heavier-leafed relative, *Styrax Obassia,* was located out of the woodland in the upper garden. The native cascara is one of the owner's favorite trees for the woodland because of its handsome striped bark.

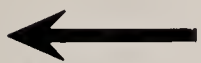
In the upper garden near the house, the autumn-flowering cherry *(Prunus subhirtella* 'Autumnalis') was well-placed and described as "a must in every garden." Also in the upper garden, near the parking area, grows a very beautiful, large *Cornus Kousa,* worth a special trip to see in the summer when its heavily-laden branches of greenish flower-like bracts turn white and then pink before falling. Mature specimens of pink dogwood are also outstanding in the upper garden, with one planting accompanied by a sweep of the white-flowered evergreen azalea, *R. mucronatum (Azalea ledifolia).*

Back in the woodland, large evergreen rhododendrons form small trees, including 'Faggetter's Favorite', 'Alice', and 'Betty Wormald', with a groundcover of blue *Scilla* beneath them. The spreading mats of ground covers and moss add considerable charm to the woodland. At the foot of a giant maple, the widely radiating leaves of *Cyclamen* make you guess the size the meaty corms must be, and to imagine what a treat the fall-flowering season will bring. Near them are planted a variety of wild anemones, growing together for a long season of spring bloom. Lacy, dwarf astilbes crowd the path in the light shade of blueberry plants, "a treat for the birds."

Tiny, blue-flowered *Veronica* softens many of the paths, and sweet woodruff grows luxuriantly beneath rhododendrons. In damp shade, you marvel at the elegance of candelabra primroses, and in another planting, the delicate foliage and white blooms of bleeding heart 'Sweetheart'.

Among the native groundcovers, wild ginger *(Asarum caudatum)* is used freely, sometimes planted with the saxifrage, London

(Continued on Page 88)



Members of Unit No. 42 in Mrs. John Blackford's garden, with the owner on the right.

FIG. 11 PHOTO BY: LYN DAVIS

The Low Maintenance Garden

Mrs. Ray Brandes*

OUR garden of about two acres was started in 1954 with 95 flats of two-year-old seedlings and cuttings—azaleas, rhododendrons, *Pieris, Kalmia,* heather and *Penstemon,*—raised in a cold frame, without the aid of a greenhouse.

The major part of the garden is on a gentle southwest slope with 25-year-old Douglas firs providing protection and privacy from north and east. We have some hardiness problems due to the 460-ft. elevation which brings early fall and late spring frosts. The sandy soil permits good drainage everywhere, but with few exceptions was found deficient in organic matter.

As to the basic principle, we wanted an atmosphere of tranquillity and repose, with emphasis on color during fall and the rainy season. Fortunately, we felt that summer color was relatively unimportant to us since the bright sunshine creates so much sparkle and gaiety. Thus, the average work demanded by annuals and perennials could be eliminated. After all, this was to be and is a do-it-yourself garden.†

Our premise that low maintenance had to start with the soil proved to be correct. We used a loader-dozer to dig all major planting areas about three feet deep. The poor subsoil was hauled away, the rest put back and the best available topsoil used to fill the beds. To this we added truck loads of bulk peat and tilled it into the surface. Between firs or native dogwoods the areas were hand dug to a depth of two feet. Wherever trees were growing on small hummocks, the soil around them was raised to avoid digging and to create more interesting contours. This was not done all at once, but over the years area by area was added and in many cases completely filled in with leafmold, rotted wood and woods soil. This we collected ourselves with our faithful old pickup dump truck, and permission from loggers, or from construction sites of roads and power lines going through woods.

In this loose, fertile and moisture-retentive soil the plants grew rapidly and remained healthy. No fertilizing or spraying has been necessary and watering chores are reduced to a minimum. During the dry summer of 1961 only rhododendrons were watered after July 24th. Today we have many areas needing practically no attention even for weeding. To keep this work down as much as possible, we use mass plantings of shrubs. These merge and intermingle often in profusion, allowing no room for weeds and creating at the same time a feeling of continuity and simplicity.

Thus, drifts of *Pieris floribunda* weave in and out of groups of *Rhodn. Schlippenbachii, R. racemosum* with *R.* 'Azor' and *R. Williamsianum* hybrids under the firs. A few *R. hippophaeoides* are tucked in here and there for a touch of light gray and soft lavender-mauve flowers with the various shades of pink in April. They also contrast with the dark and light greens of the others in the nonflowering season. In early May, the creamy yellow, pink edged bells of *Enkianthus campanulatus* carry on color interest in a group above them. This is intensified in autumn by their brilliant red foliage added to the gold and bronze tones of *R. Schlippenbachii.* But the star here at this time is definitely *Oxydendrum arboreum.* It takes on the brightest tints of all, to show off its long drooping sprays of white flowers.

Across it and an eight-foot-wide grass walk, *Hamamelis mollis* reaches up and over the *Pieris* with its arching branches of small yellow flowers in January. Below them *Helleborus niger* and *H. orientalis* bloom from December through March, stretching out in two directions to *Rhodn. mucronulatum.* Frost often destroys their rosy-purple blos-

*Mrs. Brandes, a member of two Arboretum Units, is an indefatigable supporter and worker for all Arboretum activities. Mrs. Brandes' garden is located about 14 miles east of Seattle, north of Issaquah.

†We had professional advice from Mrs. Wendell Brazeau; the house and the adjoining area was designed by Frank Lloyd Wright.

soms during February, but a few days later new ones appear on the bare gray branches. *Prunus subhirtella* 'Autumnalis' above one group seldom opens its rose-pink flowers until the beginning of February for us. On the other side, the white flattish flower heads of *Viburnum tomentosum* brighten up an area between firs in May. This over a profusion of *Erica darleyensis,* the native *Mahonia nervosa* and *Penstemon fruticosus* going down a slope to the south. On the point, creating change in elevation, is a thick short log with *Ledum groenlandicum* growing right out of it. Even though this bed is rarely watered more than twice a season, the *Ledum* is flourishing and covered with white blossoms every year.

A group of *Galax aphylla* on one side of the witch hazel brings some color into June with their cool white flower spikes (fig. 13). Their glossy green foliage takes on burnished gold tones and is effective all winter. It spreads and covers the ground.

The above plantings can be seen from the south-west windows of the living room and are partly illuminated for winter pleasure.

On the other side, over the patio wall, we look into carefree plantings of *Juniperus Sabina* 'Tamariscifolia', *Erica carnea* 'Vivellii' and 'Springwood'. The latter falls over the wall and behind it slopes of salal, *Gaultheria Shallon,* angle off into the firs, with *Cornus Nuttallii* and *C. florida* 'Rubra' by one of them. This area is illuminated, together with a simple pool below the wall. We can enjoy this all year, after so much of the garden disappears in the darkness.

Behind the junipers and heather, *Rhodn. Schlippenbachii* and *Viburnum Davidii* groups lead to *Cornus Kousa* and the sourwoods, *Oxydendrum arboreum,* respectively. *Acaena glauca* is growing between the Viburnums

Below—
The Brandes garden—*Pieris floribunda* flowering in early spring.

FIG. 12 PHOTO BY: RAY BRANDES

until the latter have covered their allotted space. Over the heather 'Vivellii', three *Corylopsis pauciflora* reach into the red foliage of *Acer palmatum* with some similarly red-tipped leaves. In a curved bed a larger green and smaller red Japanese maple, with three large junipers shading their roots, separate the patio from a turn-around drive.

On the south side, *Acer platanoides* 'Crimson King' brings out the rose tints of the cinder block wall. Elsewhere, blue-gray *Juniperus squamata* var. *Meyeri* contrasts with the wall. *Leucothoe Davisiae* fills a one-foot-wide space in the shade and *L. Catesbaei* does the same on a much larger scale. There *Daboecia cantabrica* blooms from July to frost out front in sun.

But the most valuable aid in creating and maintaining our garden has been our native plant material. The Douglas firs, many with branches sweeping the ground, give the various areas a sense of containment. Salal and Oregon grape growing underneath needed only weeding, a little pruning and perhaps watering for a couple of years to make them spread densely. We only had to dig the larger bare spots among them to tuck in congenial plants. *Calluna vulgaris* 'Aurea', *Erica cinerea, Hypericum Androsaemum* for summer color in sun, kinnikinnick and Mugo pine for larger bare places. Winter jasmine, *J. nudiflorum,* together with *Cotoneaster Dammeri,* emerge from salal and Oregon grape to spray over a wall for February color. Or *Cornus canadensis, Mahonia Bealii,* rhododendrons and *Astilbe* in the shade.

The little twin-flower, *Linnaea borealis,* so fragrant in June, now completely covers the slopes around two shady retreats. The eastern *Tiarella cordifolia, Mahonia nervosa, Chimaphila umbellata, Gaultheria ovatifolia,* Deer fern, also *Ledum groenlandicum, Vaccinium ovatum* and *Pachistima myrsinites* are interplanted with it. *Cornus Nuttallii, Vaccinium parvifolium,* the later added Vine maple, *Acer circinatum,* and red flowering currant, *Ribes sanguineum,* bring autumn color, flowers and food for the birds.

Many lovely eastern natives also work for us. The sweet fern, *Comptonia asplenifolia,* and *Clethra alnifolia* spread from the roots. The first with fragrant foliage if crushed, the second with scented white panicles in July. With it, *Shortia galacifolia, Hepatica triloba, H. acutiloba* and *Epigaea repens,* the Mayflower, quickly covered the ground. So does *Pachistima Canbyi* and the prostrate *Potentilla tridentata; Hypericum Buckleyi* grows rapidly to a 12-inch-wide mound of good yellow flowers in July and August. All but *Clethra* and *Comptonia* are evergreen. The pink saucer-shaped flowers of *Kalmia latifolia* bridge the gap between the rhododendron flowering season and the summer blooming heaths. And there are many more.

One big chore every year both my husband and I would not give up. We cut off all the faded flower sprays of *Pieris floribunda.* In return, the chartreuse to creamy flower buds brighten up the garden in the long gray season, especially at night under illumination (fig. 12).

Ours is not a finished garden. We are still looking forward to next spring and to many more, to watch and see it grow.

Below—

Galax aphylla, in flower in Ray Brandes' garden, near Issaquah, Washington, June 16, 1962. Stems 15 inches high.

FIG. 13 PHOTO BY: B. O. MULLIGAN

A Collector's Garden

Mrs. Edward Maxey*

FOR many years the hours I've enjoyed the most have been those spent in our garden and in the mountains of western Washington. My husband and I are both very interested in hiking, climbing and skiing and have tried to bring some of the mountain scenery into our garden by collecting plants.

Our home is located on a gently sloping lot in a relatively new section of Aberdeen, which is close to the coast in western Washington. We utilized the natural contours and saved all native trees and other plants possible, such as vine maple *(Acer circinatum)*, cascara *(Rhamnus Purshiana)*, crab-apple *(Malus fusca)* western red cedar *(Thuja plicata)*, western hemlock *(Tsuga heterophylla)*, European mountain ash *(Sorbus aucuparia)*, rusty menziesia *(Menziesia ferruginea)*, red whortleberry *(Vaccinium parvifolium)*, salal *(Gaultheria Shallon)* and ferns.

Even before construction of our new home we began collecting rhododendrons and azaleas which now provide the bulk of our shrubbery. We confined our purchases principally to medium and dwarf rhododendrons and over the years have become especially fond of the species.

Our aim has been to develop a garden that is pleasing in appearance but requiring a minimum of care. Ground covers are very useful for this purpose and there are many natives available which we have used. Among them are Oregon wintergreen *(Gaultheria ovatifolia)* and *Gaultheria humifusa*, bunchberry dogwood *(Cornus canadensis)*, *Coptis*, twinflower *(Linnaea borealis)*, Alaska spiraea *(Luetkea pectinata)*, kinnikinnick *(Arctostaphylos Uva-ursi)*, Menzies penstemon *(Penstemon Menziesii)*, spreading phlox *(Phlox diffusa)*, smooth douglasia *(Douglasia laevigata)*, stonecrop *(Sedum divergens* and *Sedum spathulifolium)*. Woolly thyme *(Thymus Serpyllum lanuginosus)* is one of our favorite ground covers as it grows in such interesting patterns. Lingonberry *(Vaccinium Vitis-idaea)* and var. *minus* have done well and are pretty the year round.

In addition to plants, we have brought in rocks which have provided a natural setting for many alpine plants, trees and ferns. We have placed the rocks in sloping areas as they are found in the mountains. The niches in rocks provide a natural setting for high elevation ferns, such as lace fern *(Cheilanthes gracillima)*, Oregon cliff-brake *(Cheilanthes densa)*, parsley fern *(Cryptogramma acrostichoides)*, and Eaton's shield fern *(Polystichum scopulinum)*. Alpine firs *(Abies lasiocarpa)* seem to enjoy the protection of rocks and penstemon and phlox creep over them as in the mountains. Mugho pine and shore pine *(P. contorta)* have been used near large rocks.

One good sized sloping area is planted in many kinds of heathers. There is quite a variation in foliage color and some varieties are in bloom the year around. It is especially attractive during the winter and early spring.

We have enjoyed collecting alpine plants and have lost very few in moving them. This enables us to secure many beautiful specimens which are not found in the ordinary nursery. An ice-ax for digging and plastic bags for packing are all that is needed. They seem to adjust very well at sea-level.

During the past two years we became interested in ferns and now have twenty-two different varieties native to western Washington. They work in nicely with other plants, especially in shady areas. Sword fern *(Polystichum Lonchitis)*, deer fern *(Struthiopteris Spicant)*, wood fern *(Dryopteris spinulosa)*, and lady fern *(Athyrium filix-femina)* grow naturally in a gully adjacent to our home but this does not lessen their desirability. We have moved oak fern *(Dryopteris Linnaeana)*, male fern *(Dryopteris filix-mas)*,

(Continued on Page 85)

*Mrs. Maxey, an ardent mountaineer, writes with enthusiasm of the plants she has personally collected and skillfully cultivated.

Problem Areas in the Garden

Mrs. Willard E. Skeel*

In almost every garden there is at least one spot that is a perpetual nuisance—either everything you plant there sulks and eventually dies, or, and sometimes even more discouraging, the planting thrives but is just all wrong in effect. Fortunately, half the battle is won by facing the fact that the problem exists; this is often the greatest hurdle for the eternally optimistic gardener. If the condition which creates the difficulty cannot be altered, the truth is that often the best solution is to build rather than plant. For example, it is more satisfactory in the end to pave even large areas than to attempt to grow and maintain a lawn under hopeless conditions. But landscape construction calls for the knowledge and skill of the professional, and it is a real mistake to do-it-yourself in concrete or brick except in a very small experimental way. So we will consider only those situations where some planting can be successful.

The two gardens that I have made present a common problem—they suffer from their proximity to the beautiful old elms on 36th Avenue E. Their roots form such a thick network just below the surface that digging means a mattock and axe. Their hunger and thirst are insatiable, and yet when one looks even a tiny bit off, we rush to call the tree-doctor. An almost equally discouraging prospect is offered by the area under the native big-leaved maples. Although their feeder roots are not quite so voracious as the elms, they cast the densest shade even when thinned, making it almost impossible to grow a decent lawn under them. And yet, such old trees are apt to be invaluable to the whole garden picture.

If the area is not needed for outdoor living, a planting of ground covers and shrubs, carefully chosen, can be a very satisfactory substitute for grass. It can be maintained with an amount of fertilizer and water that would be lost in the struggle for lawn.

Of the low growing ground covers for shade, ivy, *Pachysandra, Vinca minor* and *Ajuga* are the toughest. In fact, so taking are the ways of ivy and *Ajuga* that I'd think twice before planting them in many spots. The small-leaved ivy gives a very nice fine texture and is not quite so exuberant as the larger common one. Wild ginger *(Asarum caudatum)* and *Euonymus radicans* are other possibilities but take longer to become established.

Perennial ground covers such as sweet woodruff *(Asperula odorata)* and vanilla leaf *(Achlys triphylla)* are undemanding, and *Epimedium,* a much choicer plant, will probably survive. However, I don't think there is much point in trying to grow such things in competition with the robust ones I've mentioned.

Mahonia, both *M. nervosa* and *M. repens,* and the native sword ferns are wonderful standbys here. As a matter of fact, I should have said first of all that native plants will always be the easiest solution horticulturally. Nature is an efficient gardener, and it helps tremendously to observe what plants grow naturally under a certain handicap.

Thus, among taller shrubs, *Mahonia Aquifolium, Vaccinium ovatum* and salal *(Gaultheria Shallon)* are invaluable. Both *Skimmia* and *Sarcococca* are sturdy, medium-sized shade lovers; *Sarcococca* will withstand the drip from trees better than most and provides wonderful fragrance in midwinter.

A number of tall shrubs either prefer shade, or will tolerate it, and also will prove fairly drought-resistant. *Aucuba* and *Fatsia* are dependable and so are *Ligustrum japonicum* and boxwood. There is a form of boxwood with larger, rounder leaves that is very graceful and faster growing than the common form. It is well worth searching for and I should like to know the variety.† *Ilex crenata,* though slow-growing, is a handsome

*A paper read to members of the Seattle Garden Club by Mrs. Skeel which we feel deserves wider publicity.

plant in dense shade; *Ilex Aquifolium* is apt to be straggly. I have been happily surprised at the performance of *Viburnum Tinus* var. *robustum;* apparently the effect of shade is offset by the often exceedingly dry soil. It blooms, not heavily to be sure, and has never mildewed as does the common form.

This is one place where variegated foliage looks attractive—it brightens the gloom and doesn't seem so garish as in the sun. There is a silver-edged *Pachysandra* that is really very attractive, variegated ivy, good old spotted *Aucuba* and *Ilex*. Both *Elaeagnus* and *Euonymus* are worth trying in their various forms though they really do best in more sun.

These variegated foliages compensate a little for the fact that almost nothing will bloom well here. Camellias are possible if you choose the sturdiest varieties and give them buckets of water during the growing season. The latter caution applies to the old skim-milk blue *Hydrangea macrophylla (hortensis)*.

The only low conifer that I've been able to use successfully is the yew—the others require either more sun or moisture.

An almost equally trying situation is low-lying ground, boggy much of the year. Frost will settle here so plants may succumb to cold heads as well as wet feet. There are few broad-leaved evergreens that will survive; *Kalmia, Leucothoe* and *Vaccinium* will grow in considerable moisture, as will *Daboecia,* the Irish bell heather. It has a long blooming period and the white form is particularly attractive. If the area is large, a planting of *Cornus alba* var. *sibirica* gives brilliant winter color with its coral-red twigs. It should be cut back hard in the spring for maximum new growth. The yellow-twig dogwood is almost as striking. This is a natural spot for the pussy willows. In a real bog, a group of skunk cabbage is handsome and, like its animal brother, does not spread its scent unless attacked.

The lovely *Rhododendron (Azalea) viscosum,* swamp honeysuckle, is native to the swamps of the east, and its small but very fragrant pink blossoms come in June or July when they are especially welcome. In a warm garden, bamboo will thrive—all too well in fact. Hemlocks and yew will withstand more moisture than most conifers.

Hot dry areas are easier to improve than either of the above; the addition of peat or any form of humus, even seaweed, will help conserve moisture, as will a sawdust mulch. There is available sawdust to which brown dye and fertilizer have been added; the first eliminates the harsh color and the second compensates for the loss of nitrogen in the soil as the sawdust decomposes.

Once the area is no longer a furnace, there are a number of shrubs from which to choose. Ground covers which actually require these conditions are kinnikinnick, heather, *Ceanothus* and rosemary. If well mulched, the smallest-leaved rhododendrons will thrive—the aromatic foliage of many is almost as much a joy as the bloom. I like *R. intricatum* and *R. impeditum* among the lavender-blues, and both *R. flavidum* and *R. chryseum* are good yellows.

The *Cistus* family, though tender, are sun-lovers. The taller ones need some pruning to keep them neat and all loathe being moved. They also resent much summer watering, a peculiarity shared by all the *Ceanothus* and *Choisya*. The last named will be much neater in the sun than the shade where some nurserymen advise growing it.

Escallonia and *Euonymus* are fairly drought-resistant, and so are the cotoneasters which range in size from the flattest of ground covers, such as *C. Dammeri (humifusa),* to the tall *C. Franchettii* and *C. Henryana*. There is nearly as much variety among the broom family.

There are good gray-foliaged plants at their best in full sun; *Senecio laxifolius,* lavender, and, best of all, the manzanitas *(Arctostaphylos* species). Both juniper and pine, in their many forms, offer a wide choice of size and shape.

These are three different situations, and there are others which present what I would call horticultural problems—peculiarities of

†Possibly 'Latifolia', but this is of stiffer habit than the normal type.—B. O. M.

drainage, shade, sun, drought or a combination of several factors which influence the growth of plants.

Often, however, the problem is not so much caused by natural as by man-made elements, buildings, walks, fences and paving, which place certain restrictions on the choice of plant material.

For example, a narrow bed between the north wall of the house and a concrete walk is a fairly common feature of both old and new gardens. Usually such an area can be easily cultivated, fertilized and watered since it is not large. A soaker hose is a great help here. *Nandina* is an ideal shrub for this position; it can be kept indefinitely down to three feet or allowed to grow tall and oriental looking, in both cases by pruning out old canes, and *Sarcococca Hookeriana* can be kept back to a narrow space, and so can the tree-form ivy. The latter can be interplanted with *Anemone japonica* which will bloom in the shade. If the bed is more than 1½ or 2 feet, you can use *Skimmia,* or at least for a while. *Fatshedera* can be trained against the house, but it has to be forced to grow horizontally; hellebores make very satisfactory and dramatic companion plants, as do ferns.

Upright forms of yew, such as *Taxus baccata* 'Erecta', or *T. media* 'Hicksii', are handsome but slow growing, as are box and *Ilex crenata*. These can all be pruned successfully for a more formal effect.

If the narrow bed is on the south side of the house, the most attractive way I know to plant it is with *Camellia Sasanqua,* espaliered. 'White Doves' is a lovely one which I know, but there are many good varieties. They don't grow too fast, yet will give an immediate effect, and the protection offered by the house shields the blossoms from fall rains or early frost.

My last suggestion is for a small, open space in a paved area—perhaps two feet by four feet—where year-round appearance is most important. The conventional way to treat it is with a planting of neat, dwarf shrubs selected for the particular exposure. For example, in partial shade you might use dwarf rhododendrons, azaleas, dwarf spruce, small gaultherias and ferns, and hardy cyclamen. In full sun mugo pine, heather, sedums, the smallest leaved dwarf rhododendrons and azaleas. These plantings will be presentable for years and the easiest plan. However, if you like to move things, you can have a new little garden for each season by using potted plants as follows. In the fall, plant five to seven bulbs in each of three pots. Bury them until February, carefully marking the spot. Small daffodil and tulip species, jonquils, snowdrops, crocuses or hyacinths can be used. In February, lift the pots from their hiding place and sink them just to their rims in the bed. Interplant them with five to seven clumps of primroses. When the bulbs fade, lift the pots and replace them with three potted evergreen azaleas of one variety but different shapes and sizes for interest. About the time the azaleas are through blooming you can set in their places three good-sized geraniums. Replace the faded primroses with *Lobelia, Ageratum* or dwarf petunias. These will all carry on until frost, at which time you plant one small interesting pine (in a pot), several clumps of *Sedum* and three to five carefully selected rocks for a vaguely oriental effect during the winter.

The azaleas and pine can stay in the same pots for several years; fertilize the azaleas in May and keep all of them heeled in a shady spot when not on display. Use fresh bulbs every year—the old ones can be planted in the garden. The primroses will need dividing every other year at least—they are not potted up. If this little garden is in partial shade, use fuchsias or begonias in summer and moss instead of *Sedum* in winter.

This sounds much more complicated than it really is and allows for plenty of color during most of the year. If I have seemed to neglect flowering shrubs and herbaceous plants it is because I have tried to confine myself to my own experience. Most of it has been gained in the very problem areas I've described, and I do hope that some parts of it will help you solve yours.

New or Unusual Plants in the Arboretum

11. *Sorbus Chamaemespilus* var. *sudetica*

J. A. Witt

THE genus *Sorbus* is a large and complex group of trees and shrubs with a distribution that covers the entire northern hemisphere. The wide distribution is matched by the very diverse forms taken by members of the genus, forms so distinct that the uninitiated will often fail to recognize them as being even remotely related. Roughly speaking, and ignoring the botanical differences, the *Sorbus* may be divided into two groups; those in which the leaves are divided into a number of small leaflets as in the common European mountain ash, *Sorbus Aucuparia,* found throughout our area, and those in which the leaves are entire. Few of this latter group are grown locally, although one occasionally runs into a specimen of *Sorbus intermedia* (or a close relative) probably planted by some early settler with Scandinavian background. Incidentally, the two groups hybridize and the offspring have leaves intermediate between the parents, almost entire but with a few free leaflets at the base.

Sorbus Chamaemespilus var. *sudetica,* our cover illustration, is one of the entire-leaved section, often called whitebeams, and like several of its close relatives is found in the mountains of central Europe. It is at home in the limestone of the Vosges mountains in France and in the Black Forest and Sudeten of southwest Germany. The type species, *S. Chamaemespilus,* has a somewhat broader distribution, and is native from the Pyrenees to the Tyrol of Austria.

There is an interesting history to the specific name of our *Sorbus*. Early herbalists noting the resemblance to the Medlar, *Mespilus germanica,* were calling it Chamaemespilus (chamae = ground, mespilus = medlar, i.e. dwarf or low growing medlar) in the 16th century. The great Linnaeus used this epithet when he gave it the binomial *Mespilus Chamaemespilus* in 1753, though ten years later the botanist, Crantz, transferred the plant to the genus *Sorbus* where it now remains. The epithet *sudetica* refers to the more southern distribution of the variety.

The specimens of var. *sudetica* growing in the Arboretum nursery are dwarf plants of an open habit. The oldest, received as seed from Sweden in 1948, is less than four feet tall; the younger, received in 1951, are still only between two and three feet tall. They are what might best be called sprawling shrubs having sinuous shoots topped with crowns of ¾-inch-long, rich green ovate to ovate-elliptic leaves clad with a whitish tomentum of hairs beneath.

The edges of the leaves tend to curl upward giving them a silvery margin—a most attractive effect particularly when seen surrounding a tight cluster of pale pink blossoms in May, or the bright fruit in September. The flower color is unusual in the genus since the majority of *Sorbus* have white blossoms, but it is the fruit that makes this species so attractive. They are ovoid, ½-inch to ¾-inch long, scarlet-red, about 5-10 in a cluster and look quite like small apples.

The spreading dwarf habit makes this whitebeam a natural subject for the large rock garden, where its shining leaves and attractive fruit would make it welcome in early fall, a time when color is needed. Given an adequate supply of moisture at the roots it is able to grow in full sun, and will slowly spread among the rocks in a manner unlike any other shrub. Since it is found in a limestone region doubtless an occasional application of lime in some form would be beneficial; in fact one might plant it among limestone blocks or dress the ground with marble chips.

Our *Sorbus Chamaemespilus* var. *sudetica* are still kept in the nursery but are now (after 10 and 14 years) big enough to be planted out in the Arboretum. Probably they will not make such a brave display as do their relatives the mountain ash, but they will be among the most unique of our large *Sorbus* collection.

What to See in the Arboretum

October, November, December

A MONTHLY study of the number of cars using Arboretum Drive E. reveals some very interesting facts. We find, for instance, that there is a very direct correlation between the number of plants flowering and the number of cars passing our counting station. As one might expect, the highest monthly counts come during April and May when the blooming season is at its height. The count then tapers off through the summer, reflecting the decline in blooms, until October, when it shows a sudden and marked increase. This is, of course, due to the fall color display that brings many visitors back to the Arboretum. The number of visitors then drops to a minimum in December when we have recorded as few as 3,600 cars during the entire month.

In a previous issue of this BULLETIN (Fall, 1961), the fall color scene was covered rather thoroughly, so a brief reminder that the main centers of interest for autumn color are in Woodland Garden, the oak section, Azalea Way and the witch hazel collection should be sufficient. A trip along Arboretum Drive E. and a short walk through the oaks and down Azalea Way to Loderi Valley and back through Woodland Garden will be very much worth while anytime from the second week in October to the first week in November.

Dying foliage is not the only source of autumnal color, since many of our trees and shrubs set brilliant fruits. October's fruit include the orange berries of the native madrona, *Arbutus Menziesii,* which are seen at their best on Foster's Island and above the north end of Azalea Way; the scarlet-red fruit of the European cranberry bush, *Viburnum Opulus,* in Woodland Garden and in the viburnum collection west of Loderi Valley, and the globular crimson, compound fruits of *Cornus Kousa* in Rhododendron Glen. Many of the honeysuckles growing on the north side of the mound west of Loderi Valley have gay fruit — *Lonicera Maackii* from northeast Asia is especially colorful early in the month.

While the majority of our crab apples and hawthorns were moved to the University campus this spring in order to clear the way for the second lake bridge there are enough left to put on a brave display. The Washington thorn, *Crataegus Phaenopyrum,* with its myriad of small sealing wax-red fruits, is best seen along Lake Washington Boulevard near the parking lot at the foot of Rhododendron Glen, and the cockspur thorn, *C. crus-galli,* immediately south of the stone cottage usually has a handsome crop of its big, reddish-brown haws. Several of the younger crab apples planted on the east side of Lake Washington Boulevard, between East Madison and the stone cottage, have become large enough to carry good crops of fruit. Among them, *Malus* 'Dolgo' has large, rosy-purple apples and 'William Sim,' with bright red, long pointed fruits, are most attractive.

Other groups with colorful fruit that shouldn't be passed over are the *Pyracantha* plantings along the Broadmoor fence, the *Euonymus* west of the Holly collection and the cotoneasters in the plantings around the office and clubhouse.

There is a surprising number of plants that wait until fall and early winter to flower so one need not depend on autumn color and fruit for interest during this period. The Franklin tree, *Franklinia alatamaha,* may be expected to display its three- to four-inch white flowers in late October and November, while the strawberry tree, *Arbutus Unedo,* usually has its white, salal-like blossoms and strawberry-red fruit concurrently in November and December. Fine specimens of these two trees are growing in the upper

(Continued on Page 89)

Some of Our Favorites☆

☆Won't You Send Us Yours?

SKETCH OF STYRAX JAPONICA
Drawn by MayBelle (Mrs. M. Chris) Johnson, who said it was the result of her training in the Education Program's Plant Sketching Class held in the Fall of 1959.

Fig. 14

Editor's Note: So that there will not be an immediate uprising of demands for more such classes, we believe Mrs. Johnson was holding back a great deal of latent talent.

Styrax japonica

IT IS autumn and the *Styrax japonica* turns a golden yellow in the afternoon sunshine, the soft green nutlets hanging like dainty charms along the graceful branches. A cold November wind blows and the leaves form a carpet at the foot of this beautiful tree.

As the year draws to a close the nutlets change from green to a warm brown and the birds find a welcome shelter in the silvery brown branches. These branches are a pleasure in form all winter and in the night light from the house they seem a glowing red brown.

Early in the year the swelling buds, in alternate pattern, give the promise of spring and if this little tree is pleasantly placed above eye level, or at least on the high side of a woodland path, the clear green of the leaves emerging from every axil of the branchlets can be attractively repeated in a groundcover of Oregon iris, oxalis or *Daphne odora*. Also, any of the low-growing evergreen ferns are lovely, but too many should not be used, as they have a very dominant pattern. The attention should be on the *Styrax*.

In June the wide spreading branches, laden with white, sweet-scented blossoms, are as beautiful as a bride in her wedding finery.

There is a spot in any garden for this handsome little tree with its many assets and, if fortunately growing close to the house to be seen as it paces the seasons, will provide beauty and interest all the year.

MayBelle Johnson

Cornus canadensis

SEVERAL years ago, while hiking in the Lake Ozette region of Olympic National Park, I fell in love with a small groundcover among the ferns and mosses. It had bright red berries surrounded by whorls of dogwood-like leaves and was seldom higher than six inches.

Later I discovered that it was indeed a ground dogwood *(Cornus canadensis)* or bunchberry. Dr. Erna Gunther reports that,

strangely enough, the Makah Indians eat the berries fresh, but the Quinault declare that they are poisonous. Birds and bears are both fond of them.

This plant is a perennial herb and spreads extensively by underground stems. It occurs quite frequently in our mountains, is definitely an acid soil lover and prefers shade. In May and June it bears greenish flowers in small heads with four to six corolla-like white bracts—a small replica of our favorite native dogwood, *Cornus Nuttallii.*

I have been moderately successful in bringing clumps from the mountains into my own garden, but am assured that once established (especially in rotten wood) it will spread beautifully.

DOROTHY SCHWAGER

The Trembling Aspen
(Populus tremuloides)

GRACE T. DOWLING

EVERY AUTUMN, in Colorado, we never failed to drive to the Spanish Peaks to see the fall coloring of the aspens. We drove through fields of gold!

Long afterward, on Bainbridge Island, an aspen tree was one of the first trees I planted in my garden. It was placed where it could be seen from the patio and I never tired watching it. The whole tree might be perfectly quiet, not making a move, then, for no apparent reason, it would begin to sparkle. It seemed to be aware of the opening of a door when immediately every leaf moved with a knowing chuckle.

The secret of this ability to spontaneously dance at the slightest breeze lies in the leaf stem. The leaves are seldom over two inches in diameter, almost round and finely toothed. Most leaf stems are fairly stiff and non-flexible, but the stem of the aspen leaf is like a soft nylon cord that has been slightly flattened at the leaf end and so is able to move with very little effort.

The flat end of the stem is placed at right angles to the leaf which gives it an added ability to move easily. One feels the whole tree moves with pleasure. When listening closely a distinct hum can be heard, produced by the friction of its many leaves. The wonder is that, with so many thousands of leaves, they don't get in each other's way and some leaves miss the drops of rain or the sun rays, both of which are so necessary to the growth of the tree. The trembling aspen, perhaps, makes one more conscious than any other tree of the countless leaves produced by trees, but nature's spiral is so arranged that every leaf has its chance to obtain sufficient light, water and air to produce the food needed by all plants and animals.

In March and early April, the flowers are hairy, pendulous catkins, the male and female produced on separate trees. When autumn comes, the leaves turn to pure gold. The color seems reflected in the air surrounding the tree.

The aspen is a slender, fast-growing tree with a greenish-gray, smooth bark which grows rather tough and rugged with age. It is found as far north as the Arctic Circle, into Siberia and the valley of the Yukon and as far south as Texas and northern Mexico.

Aspen wood has been used in many ways, especially for articles that require a light, soft texture. It helps in the production of gunpowder manufacture when the wood has been previously powdered.

American Aspen *(Populus tremuloides)* is called the most widely distributed tree in North America.

There is a "Big-toothed Aspen" *(P. grandidentata),* native in the eastern United States, whose leaves are irregularly notched. Both of these trees are used for wood pulp.

GRACE T. DOWLING

We offer our apologies for the regrettable fact that the cover picture of our last issue, showing flowers of *Pterostyrax hispida,* was, unfortunately, printed upside down. Even though it may have looked pretty, it was certainly misleading to those unfamiliar with this tree.

Shrubs for the Rock Garden

There will be a three-lecture series on shrubs suitable for planting in Rock and Alpine Gardens offered by the Education Committee this coming January. The course will be given by three of the most outstanding northwestern specialists in the field: The Robert Bovees of Portland, the Greigs of Royston, Vancouver Island, and Mr. E. H. Lohbrunner of Victoria, B. C. The discussions will cover such subjects as dwarf Rhododendrons, low growing conifers, dwarf shrubs, and native plants suitable for the rockery. Each lecture will be held in the Clubhouse on January 9, 16, and 23 from 10:00 a.m. to 12:00 noon and will be repeated again from 7:30 p.m. to 9:30 p.m. The fee to Arboretum Foundation members is $6.00, to non-members, $9.00. Reservations are by mail only and must be accompanied by the registration fee. Please indicate either morning or evening session and send to the Arboretum Foundation, c/o University of Washington Arboretum, Seattle 5, Washington.

Garden Hints

The three Ps associated with the fall and early winter months should be remembered at this time—**Pruning, Planning** and **Planting.** A fourth is **Propagating,** although this is not the peak season for that task.

Pruning of all deciduous trees can and should be done as soon as possible, especially fruit trees (apples, pears, plums) and their relatives among the flowering trees,—crab apples and cherries; flowering plums such as *Prunus Blireiana* and the purple-leaved forms of *P. cerasifera* are perhaps better treated immediately after flowering. Other trees which should be pruned before Christmas are the maples, birches and horse-chestnuts, in which the sap starts to rise very early in the year and bleeding will occur if pruning is delayed to February or later. Conifers also should be pruned at this time, especially pines, firs and spruces.

Important points are: (1) to remove crowded or crossing branches entirely, retaining the well placed, strong stems; the tops can be shortened back one-third if necessary, especially with young trees making vigorous growth, but do not cut them all to the same height; weaker branches can be cut harder than strong ones. (2) Shoots arising from below ground should be dug out at their point of origin; those on the stem cut back to one inch if the tree is young, to strengthen the trunk, or removed entirely if it has attained a diameter of 3-4 inches. (3) Cut out all dead wood to a point where completely healthy tissue can be seen, or back to the main stem.

Renew ties on stakes wherever necessary. Winter spraying should not be done until pruning is completed, or much work and valuable material will be wasted.

Planning is a matter for serious consideration, especially in the initial stages of making a garden; what purpose is the garden to serve, who will principally use it, what kind of soil and climatic conditions exist and should they be modified in any way, what plants are desired, will they be suitable for the site, how much is to be lawn, where will the paths be and of what material, what about a sprinkling system and water supply, lighting, and so on. There are many such details to think about before any plants go in; the first of these may well be grass seeds in the fall, the next a tree or trees for shade or screening purposes. *Garden Design*, by John and Carol Grant (University of Washington Press, Seattle, 1954), is very helpful and full of good ideas for Puget Sound conditions. (So also is John Grant's *Pruning Is Simple* (Dogwood Press, Seattle, 1948), on the preceding subject).

On the matter of **Planting** there is little doubt that the period from late October to Christmas is the best for planting in our area, and generally in Washington and Oregon west of the Cascade range. The ground is still warm from summer sunshine but moistened by early fall rains, so that plants are encouraged to make fresh young roots to support them through the winter months, followed by an early start into activity again the following spring.

There is also no doubt at all that it pays handsomely to excavate a much larger hole than the size of the root system seems to require,—half as large again is reasonable, and more than that if the soil is poor and has to be replaced with better material.

Make sure that there is proper drainage, especially in clay soil, or you will have a waterlogged, sickly or dead tree by the spring. Set an adequate stake on the windward side as soon as it is placed in the hole, before covering the principal roots, so that they are not broken by doing this later; drive it in when the planting is completed and tie the tree firmly to it, making several twists of the cord first around the stake. Firm the roots by treading gradually as the filling is being done, not just at the end of it, or you will have air pockets and loose soil in the lower levels. Finish off with a 3-inch mulch of compost, peat, or partially rotted leaves, to retain the moisture and prevent the ground from freezing too easily.

Plant all evergreens first,—conifers, hollies, rhododendrons, camellias, etc. Deciduous material can wait until February—March if necessary.

The Arboretum Bulletin

Vol. XXV, No. 3 Seattle, Wash. Fall, 1962

ARBORETUM FOUNDATION
OFFICE HOURS
9 a. m. to 4:30 p. m.
Monday through Friday
Phone EAst 5-4510

ARBORETUM FOUNDATION OFFICERS

Donald G. Graham, *President*
M. C. Collarino, *Vice-President*
Donald K. McClure, *Vice-President*
Mrs. Pendleton Miller, *Vice-President*
Mrs. John Schwager, *Vice-President*
Mrs. Henry Schmitz, *Secretary*
Charles W. Callahan, *Treasurer*
Miss Gene Webb, *Executive Secretary*

BULLETIN EDITORIAL BOARD

Brian O. Mulligan, *Editor*

Mrs. Page Ballard
Mrs. Robert Berry
Mrs. Donald C. Davis
Mrs. J. Thomas Dowling
Mrs. Allen B. Engle
Dr. Arthur Kruckeberg
Dr. David Scott
Mrs. Leonard Wilcox
Mrs. Kemelm Winslow

Special Notice

To keep memberships in the Arboretum Foundation in good standing, dues should be paid during the month payable. Active memberships more than three months in arrears will be dropped and The Bulletin will be discontinued.

Arboretum Membership Blank

☐ Life	$500.00
☐ Sponsor	100.00 to 500.00
☐ Supporting	50.00
☐ Contributing	25.00
☐ Sustaining	10.00
☐ Annual	5.00
☐ Group Affiliation Garden Clubs, etc.	10.00 or more

The Arboretum Foundation,
University of Washington Arboretum
Seattle 5, Washington

I hereby apply for membership in the Arboretum Foundation and remittance for same is enclosed to cover dues for the next succeeding 12 months.

Name .....

Address .....

All memberships are non-assessable.

We Would Like to Draw Your Attention To—

Your Bulletin is not only enjoyed locally by you and your neighbors, but there are just as ardent readers and members in far-away places, including:

Alabama, 2; Arizona, 1; California, 21; Colorado, 1; Georgia, 2; Idaho, 2; Illinois, 2; Louisiana, 1; Maryland, 2; Massachusetts, 6; Mississippi, 1; Missouri, 1; Montana, 2; New Jersey, 4; New York, 14; North Carolina, 1; Ohio, 4; Oregon, 37; Pennsylvania, 7; South Dakota, 1; Tennessee, 1; Washington, D. C., 4, and Wyoming, 2.

And in even more remote spots—Alaska, 1; Brazil, 1; Canada, 18; Czechoslovakia, 1; England, 2; France, 2; Guatemala, 1; Hawaii, 2; India, 1; Ireland, 1; Japan, 1; Mexico, 1; New Zealand, 1; Poland, 3; Scotland, 2, and Switzerland, 4.

Another aspect in the cosmopolitan nature of the Arboretum's activities is its participation in the international seed exchange. This completely informal exchange of seeds between the world's arboreta and botanical gardens has been discussed in previous issues of this Bulletin, but the figures for the current year's (1961-62) exchange is of considerable interest. We offered seeds of 408 species and varieties to 224 foreign and 65 domestic institutions. We received back requests for seeds from a total of 172 gardens and sent them 3,849 packets of seed, a record high number.

Of these 172 institutions, 150 were foreign, the U.S.S.R. leading in numbers with 26 requesting a total of 712 kinds of seeds; the United Kingdom next with 21 gardens wanting seeds of 364 species, followed by Germany with 17 requests for 321 packets of seed. The twenty-two American gardens received 319 species, less than half the amount sent to the U.S.S.R.

Again the Arboretum staff's most sincere thanks go to Unit 25 for the many long hours they spent filling these numerous requests.

J. A. W.

The Director, with Mrs. Mulligan, attended the 38th convention of the International Shade Tree Conference in San Francisco, August 5-10; was the Northwest member of a panel discussion on "New Shade and Ornamental Trees of the West"; gave a report on western arboreta and botanical gardens (as chairman of the Arboreta Committee), and was elected vice-president of the Western Chapter.

A conducted tour of the rejuvenated Strybing Arboretum by the Director, Mr. P. H. Brydon, was one of the highlights of the visit, especially to see the recently constructed, multi-purpose Hall of Flowers.

* * *

Mr. J. A. Witt, Assistant Director, has been elected a Director of the American Association of Botanical Gardens and Arboretums for a two-year period.

* * *

Mr. Mulligan will again conduct two pruning demonstrations on Saturday, November 3 and 24. Meet in the parking area by the office at 10 a.m.

* * *

There will be an exhibit of conifers (cut branches or young plants and cones) and of fall colored foliage in the Arboretum clubhouse, Saturday, November 3, through Sunday, November 4. Hours: 10 a.m. to 5 p.m.

A Collector's Garden

(Continued from Page 75)

alpine lady fern *(Athyrium americanum)*, leathery grape fern *(Botrychium silaifolium)*, brittle bladder fern *(Cystopteris fragilis)*, Vancouver fern *(Polystichum Andersonii)*, maidenhair spleenwort *(Asplenium Trichomanes)*, giant chain fern *(Woodwardia radicans)*, licorice fern *(Polypodium vulgare)*, leathery polypod *(Polypodium Scouleri)*, common maidenhair *(Adiantum pedatum* var. *aleuticum)*, Rocky Mountain woodsia *(Woodsia scopulina)*, gold-back fern *(Pityrogramma triangularis)*, and those already mentioned in the rock plantings. Some of these are rather difficult to find but this adds a very special zest to their acquisition.

We do not feel that there is anything incongruous about combining these native alpines with commercial garden hybrids; rather, we feel that they grow together in happy companionship, each complementing the other. Our collected plants have an extra bonus for they carry with them our memories of the magnificent mountain scenery where we found them growing. Our garden is our small scale interpretation of the beauty that we found there.

We continue to make additions and changes in our garden and I doubt that it will ever really be finished; that's what makes it so fascinating.

This is your Arboretum, kept alive by your support

We are pleased to welcome the following new members (June 9 through September 4, 1962): *Sustaining*—James J. Brennen, Mrs. Thomas W. Nash, Richard B. Newell. *Annual*—Mrs. Edw. A. Bourassa, Mrs. Leonard Foley Eshom, Mrs. Robert M. Ford, Mrs. E. B. Genung, Mrs. Max W. Gerber, Jr., Mrs. Wm. Lee Hamilton, Mrs. Maurice I. Nelson, Mrs. Guy E. O'Neil, Jr., Mrs. Jean O'Neill, Alden J. Perrine, Mrs. John P. Phifer, Mrs. George Piternick, Mrs. Charles H. Renshaw, Mrs. Martha Roslund, Mrs. John A. Schreiner, Mrs. Elizabeth H. Shotwell, Mrs. C. L. Stamey, Mrs. S. J. Steffen, Mrs. Loren O. Turner, Dr. James L. Vadheim, Mrs. Herbert P. Vail, Mrs. David H. Veblen, Mrs. LeRoy A. Weller, Mrs. Richard C. Worthington.

We are also most grateful to the following members who have raised their dues to: *Contributing*—Dr. and Mrs. David Metheny, Thomas Telfer. *Sustaining*—Mr. and Mrs. John D. Ehrlichman, Mrs. Thomas O'Brube.

BOOK REVIEWS

Flora of New Zealand, Vol. 1, by Dr. H. H. Allan. (R. E. Owen, Government Printer, Wellington, N. Z., 1961.) Price, $14.75.

DR. ALLAN'S comprehensive manual of New Zealand plants (excluding monocotyledons) is a bit overpowering to the amateur, with its many unfamiliar genera and families, but, since the University of Washington Arboretum is testing an ever-increasing number of the Southern Hemisphere's trees and shrubs, this excellent handbook will no doubt be used by gardeners and students as well as staff members.

This flora of over one thousand pages is remarkably convenient in size because of the use of a thin, coated Bible paper, a small but very legible type, and a system of signs and abbreviations—all of which have contributed to the possibility of including a great deal of information in a small space. While this flora would make a fine addition to the gardener's luggage on a trip to New Zealand, even the stay-at-home will find it interesting to learn which Pacific Northwest natives have relatives in that distant land. Maidenhair fern *(Adiantum)*, the spleenworts *(Asplenium)*, grape-fern *(Botrychium)*, lacefern *(Cheilanthes)*, ladyfern *(Athyrium)*, *Anemone, Campanula, Claytonia* (Spring-beauty), *Clematis, Gaultheria, Gentiana, Geranium, Geum, Oxalis, Rubus, Viola,* and others give us a vegetative bond with the other side of the world.

New Zealanders in this flora now growing in Northwest gardens are *Acaena caesiglauca, Carmichaelia Enysii, Coprosma* species, *Corokia Cotoneaster, Cotula squalida, Cyathodes Colensoi, Hebe* species, *Leucopogon Fraseri, Nothofagus fusca, N. Cunninghamii, Gaultheria antipoda, G. depressa, G. oppositifolia, G. rupestris, Pernettya nana, P. macrostigma, Pachystegia insignis, Olearia* species, *Rubus australis, R. parvus* and others.

An admitted bias led me to the section on the *Ericaceae* and I found that Dr. Allan has made a real contribution in bringing together the findings of previous authors who were concerned with this family. Most interesting statements are made as to the tendency of the gaultherias to produce varieties and forms, and regarding hybridism between the species of this genus and those of *Pernettya.*

Northwest gardeners will find many reminders here of the truly cosmopolitan character of their own familiar gardens.

PAT BALLARD

* * *

Seattle Cityscape, by Victor Steinbruck. (University of Washington Press, Seattle, Washington, 1962.) Price, $4.75 ($3.95 in heavy paper covers).

MR. STEINBRUCK has endeared himself to every Seattle enthusiast with his delightful sketches of our favorite landmarks. This is the perfect gift for an ex-Seattleite—a reminder of the city as he knew it and to bring him up to date on the Seattle of 1962. But it is equally right for the Seattle visitor who wants a practical guidebook and for the newcomer eager to orient himself to his new surroundings.

Every Arboretum lover will thrill to Victor Steinbruck's enthusiasm for "one of the city's most precious assets, exemplifying the quality of landscape possible here . . . another green interlude in the city's pattern . . . with its outstanding and extensive botanical collection . . . very dear to the hearts of many citizens . . . One group, the Arboretum Foundation, is completely devoted to its development and good use."

F. S. B.

* * *

Manual of the Trees of North America (Exclusive of Mexico), by Charles S. Sargent. Reprinted by Dover Publications, Inc., New York, N. Y. (1962), in 2 vols. Price, $2.00 each.

MOST OF US are aware of the impact of "paperback" books in quality literature. Many standard reference books have been issued in recent years in this more economical form, broadening their usefulness by bringing them within reach of greater numbers of people. A recent entrant in this field is the "Manual of the Trees of North America (Exclusive of Mexico)" by Charles Sprague Sargent.

This recent "paperback" edition is in two volumes at $2.00 each and represents an unabridged reproduction of the original hard-cover work. Volume 1 includes the Gymnosperms, together with the Angiosperms from *Palmae* to *Crataegus* in *Rosaceae.* Volume II completes the *Rosaceae* and continues through *Caprifoliaceae.*

C. F. B.

ARBORETUM

UNIT PLANT SALE

At the Arboretum

9:00 A.M.

WEDNESDAY

OCTOBER 3, 1962

The same wonderful plant material as always

Tell Your Friends

A City Garden

(Continued from Page 68)

yosho pines *(Pinus densiflora* 'Umbraculifera') were used for their formal topiary appearance. Also the exotics like *Acanthus, Cordyline, Euphorbia Wulfenii* and hostas were used for their lushness in groups and in accent points. White *Astilbe* also played a summer blooming role in beds surrounded by small leaved English ivy.

Trees used within the rear garden were vine maples, 'Mt. Fuji' ('Shirotae') cherries, *Magnolia denudata* and *Cornus Kousa.* The cherries were used within the lawn area on the lower level of the garden, planted in an L so as to make a canopy to repeat the arbor in plant form.

Other plants within this area were candytuft, *Rhododendron* 'Adriaan Koster', Japanese black pine, *Arbutus Unedo,* Mugho pine, *Viburnum Davidii,* a large cream colored specimen azalea, *Raphiolepis,* small leaved English ivy, *Sagina* moss used to form squares of rich green carpet near the pools, and clumps of fall-blooming Japanese anemone used for its white poppy-like blossom.

The garden changes its appearance with the seasons by the use of white petunias and yellow marigolds planted in beds and pots placed throughout the paved surfaces. During the spring the annuals are replaced by bulbs. Throughout other seasons the many white pots used in the garden can be filled with potted chrysanthemums to enable Mr. and Mrs. Ellsworth to enjoy their garden the entire year, as if summer were here to stay.

A Hillside Garden in the Spring

(Continued from Page 66)

And as you approach the house again, having made a swing through the entire garden, carefully pruned camellias pattern the white walls of the house, set off by primrose borders. Under the tender new leaves of a deciduous magnolia, white azaleas bloom interspersed with clumps of white tulips. And you recall as you look back, what a graceful transition the garden makes from woods to sunshine, from vine maple to green and luxuriant Japanese maple. A last look from the balcony of the house reveals that the garden was planned to be seen from above; its textures and colors making a lively, changing pattern.

PLEASE MENTION THE ARBORETUM BULLETIN WHEN BUYING FROM OUR ADVERTISERS

REARDON WHOLESALE NURSERY
Rhododendrons
Heather
Azaleas
14244 First Avenue South
Phone CHerry 3-4134

ALL TYPES OF GARDENS
NURSERY PLANTS — SHRUBS — GARDEN SUPPLIES
Seattle's Largest Nursery — 7 Acres
anhalt's shur-gro nurseries
5020 25TH AVENUE NORTHEAST LA 3-5000

General Nursery Stock
RHODODENDRONS
AZALEAS
& Garden Supplies
CLIFTON'S
2939 East Madison
NURSERY & GARDEN STORE
EA 2-6756

Woodland Garden

(Continued from Page 71)

Pride. *Cornus canadensis* grows happily on a rotted log, spilling over to the path. "A sure way of transplanting it successfully from the mountains, is to grow it on a log," our hostess commented.

Trillium, Solomon Seal, *Iris cristata,* are all growing happily in this garden, and given the prominence they deserve. The common low Oregon grape *(Mahonia nervosa)* covers a large, mossy log with a solid mat of prickly-tipped leaves, just as it did before the garden was cultivated. The tiny, glossy-leaved ground cover, *Vaccinium Vitis-idaea* var. *minus,* with its rosy bells and bronzy new leaves, forms a widespreading mat, and grows into a neighboring evergreen dwarf *Penstemon,* with which it combines well. Across the path, a wide edging of dwarf *Rhododendron keleticum* is a treat to see. A variety of gaultherias is seen throughout the woodland. In the upper garden and along the drive are many more interesting plant groupings, skillfully planned and carefully maintained. Primroses are used in many places for their cheerful spring color.

Mrs. Blackford generously offers to arrange garden tours for interested Arboretum Units, as well as to arrange cutting parties. A trip through the garden is rewarding to beginner and experienced gardener alike. For the beginner, it is pure joy to see the little jewels described in garden books growing luxuriantly under ideal conditions, and to see the mature size of flowering shrubs. The experienced gardener is perhaps most interested in studying the plant groupings, and, always, to learn something new about an old favorite.

How do you take care of two acres of garden? In the summer, watering is the main concern. Warm water, piped from the lake, helps keep the garden healthy. Fall maintenance includes removal of all fallen leaves for composting. This must be done by hand so the tiny groundcovers won't be injured. February is the busiest month of all, says Mrs. Blackford. At this time the garden is mulched with cow manure and compost. Weeds are pulled before they go to seed. All year the garden is carefully groomed, and every faded blossom removed, quite a task with dwarf rhododendrons as well as tall azaleas.

Arboretum Report

(Continued from Page 63)

Telephone Enquiries

July 1, 1961, to June 30, 1962	1,974
July 1, 1960, to June 30, 1961	2,216

Second Lake Washington Bridge, Arboretum Interchange and R. H. Thomson Expressway

Work on the former, which crosses Foster's Island near its northern end, has been in progress since July, 1961, first on the east, later on the west side of the island.

That on the Interchange began in February, 1962, removing all the area north of Lake Washington Boulevard and west of Calhoun St. from our charge and public use.

The Director represented the Arboretum staff at public hearings by the full city council on April 30 and May 3, 1962, on the proposed alternative routes for the Thomson expressway, and made a statement on the history, development and work of the Arboretum. Members of the University faculty and administration, headed by Dr. C. E. Odegaard, also presented strong supporting statements and gave testimony.

Miscellaneous

Eight new terrazzo benches were given by the Arboretum Foundation and erected along Azalea Way, July, 1961. Two floodlights were installed on a power line pole outside the office in February to illuminate the surrounding parking areas.

Nearly 100 new printed signs mounted on strong metal stakes have been set out, indicating Latin and English names and country of origin of important trees and shrubs.

The Assistant Director, Mr. J. A. Witt, attended the International Shade Tree Conference in August at Minneapolis, Minn.

Weather

July, August and September, 1961 were both drier and sunnier than usual, especially September. The fall months were slightly cooler and drier than normal; the dry pattern continued into 1962, the first five months producing only 12.60 inches of rain instead of the normal 15.97 inches.

There were two cold periods during the winter; the first for a week in mid-January when the lowest temperature was 13°F.; the second, the last week of February, when the minimum recorded was 18°; seven inches of snow fell on the 28th.

Some damage was caused to the less hardy evergreen trees and shrubs by this cold weather, and a few were killed, even against buildings, but most are now making good recovery. Flowering of almost all trees and shrubs was exceptionally heavy this spring, no doubt due to the additional sunshine received last summer, and with generally cool weather blooms lasted distinctly longer than usual.

What to See in the Arboretum

(Continued from Page 80)

Rhododendron Glen area, the *Arbutus* in the Glen proper, the *Franklinia* a little to the south in the camellia section. We may also expect some early flowering from many winter-blooming trees and shrubs in the latter half of November and in December if the weather is mild. The Winter Garden contains many of these plants. *Viburnum fragrans* and *Viburnum* x *bodnantense* 'Dawn,' Chinese witch hazel, *Hamamelis mollis, Rhododendron mucronulatum* and a carpet of winter heaths, *Erica carnea* in variety, are a few that may be flowering before the end of the year.

For the past several years we have made a count of plants flowering outside at Christmas time and may find two dozen or more—no vast number compared with mid-May but certainly enough to make a visit to the Arboretum worth while, even in the midst of winter.

J. A. W.

FURNEY'S HI-LINE NURSERY

ALL TYPES OF GARDENS

Unusual Plants for Those Odd Spots

Over 350 Choice Landscape Items

21215 Pacific Highway South
TRinity 8-8761

DEODORIZED!
ALASKA
FISH FERTILIZER
100% ORGANIC ALL FISH
NOW HAS T. C. B.
HELPS PREVENT
Mildew
WHEN APPLIED TO FOLIAGE
DOG AND CAT REPELLANT ADDED

BEAUTIFUL FLOWERING SHRUBS AND TREES
Visit us for all your BROAD-LEAVED EVERGREENS and also for UNUSUAL SHRUBS, PLANTS and TREES
BONNYBROOK NURSERY
KIRKLAND-BOTHELL HIGHWAY
VAndyke 2-5917

In Seattle...1 out of every 3 people
Save with Washington Mutual

MAIN OFFICE:
SECOND AT SPRING
SEATTLE,
WASHINGTON

WASHINGTON MUTUAL SAVINGS BANK
Northwest's Oldest and Largest Savings Institution

TOTAL ASSETS OVER $348,000,000 • MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

BRANCHES: AURORA VILLAGE, BALLARD, BELLEVUE, RENTON, TIMES SQUARE, UNIVERSITY, WEST SEATTLE, WHITE CENTER

Richmond Nurseries

A Pioneer Nursery Dedicated to the Beautification of Northwest Homes

Since 1903

We carry one of the most complete lines of new and rare plants available and suitable for this region, both container and field grown.

AZALEAS . . . RHODODENDRONS
ORNAMENTAL BROADLEAF EVERGREENS
DECIDUOUS FLOWERING SHRUBS
SHADE AND FLOWERING TREES . . . CONIFEROUS EVERGREENS
AND A GOOD SELECTION OF GROUND COVERS

Seattle-Everett Highway (Aurora Avenue) to Richmond Highlands (North 185th)
One Mile West of Richmond Beach Road

Lincoln 2-4611 RICHMOND NURSERIES **Lincoln 2-4611**

"Our Business Is Growing"

ROBERTSON TREE SERVICE

We Preserve Trees

SURGERY
PRUNING
TOPPING
BRACING
CABLING

Diagnosis and Inspection

FREE ESTIMATES

REFERENCES

Licensed and Insured

SH 6-3100 (Any Time)

Bunge Lumber & Hardware Co.

High Grade Peat Moss and All Types of Fertilizer

Including

Acid Fertilizer for Rhododendrons, Azaleas, Camellias, etc.

WEst 2-0022

9616 16th Avenue S.W., Seattle 6

For GIFTS and FLOWERS

of Unmistakable Distinction

Crissey
FLOWERS · GIFTS

1329 Fifth Avenue

MAin 2-1100

Washington Association of Ground Sprayers

Chemical applicators and plant experts . . . State tested and licensed. For professional insect, slug and weed control, soil sterilization, liquid fertilizing or pruning,

Call one of the following:

GREENUP SPRAY SERVICE **CHerry 2-4720**
12437 1st Ave. S.W.
If No Answer Call
WEst 5-2175
All Spray Work Guaranteed

SEATTLE SPRAYING & TREE SERVICE **SUnset 3-2633**
JACK IRWIN, *Manager*
10417 Fremont North
If No Answer Call
PRospect 6-6905

SPRAGUE SPRAY SERVICE **LAkeview 2-5188**
GEORGE MOCK, JR., *Owner*
Money-Back Guarantee on Peach Leaf Curl
1115 North 94th

WASHINGTON TREE SERVICE **EMerson 2-9100**
17868 28th Ave. N.E.

PREVENT ROT
WITH
CUPROLIGNUM

Rot is expensive and inconvenient when it rots your

COLD FRAMES
SEED FLATS
WINDOW BOXES
GARDEN STAKES
TRELLISES
HOTHOUSE BENCHES
ETC.

Where there is CUPROLIGNUM *there is* NO ROT

Sold by Most Lumber Yards and Hardware Dealers

Manufacturers

Rudd Paint & Varnish Co.

SEATTLE

Sole Distributors RUDD & CUMMINGS

1608 15th Ave. W. SEATTLE, WASH.

FALL IS HERE

"Visitors Welcome"

Complete Assortment of Trees

SUCH AS

Styrax japonica

FLOWERING TREES, SHRUBS AND BROAD-LEAVED EVERGREENS

CLEMATIS VINES

And a Wide Selection of Other Flowering Vines to Choose From

HOPKINS NURSERY

On Old Bothell-Kirkland Highway

15028 100th Ave. N.E. Bothell

HUnter 6-2061

BEAUTIFY YOUR GARDEN

ALL TYPES

Hill Gardens • Woodland Gardens and Small City Gardens

SHRUBBERY

AZALEAS • CAMELLIAS
FLOWERING TREES
DWARF FRUIT TREES
RHODODENDRONS

SEEDS • FERTILIZERS
INSECTICIDES
GARDEN TOOLS
POWER MOWERS

ALL YOUR GARDEN NEEDS

OPEN 7 DAYS A WEEK
FOR YOUR CONVENIENCE

5 CORNERS NURSERIES
LANDSCAPING
AND GARDEN STORE

FIRST AVENUE SOUTH
AT SOUTH 160TH STREET

CHerry 2-2931

THE ARBORETUM BULLETIN
Published by the
Arboretum Foundation
University of Washington Arboretum
Seattle 5, Washington
RETURN REQUESTED

MRS. H. RAPHAEL
2841 MAGNOLIA BLVD. WEST
SEATTLE 99, WASH.

BULK RATE
U. S. POSTAGE PAID
SEATTLE, WASHINGTON
Permit No. 413